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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/633,104

08/01/2003

Darel Emmot

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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT

PAPER NUMBER

2145

NOTIFICATION DATE

DELIVERY MODE

09/04/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/633,104	<b>Applicant(s)</b> EMMOT, DAREL	
	<b>Examiner</b> Jeffrey R. Swearingen	<b>Art Unit</b> 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 7/31/2008 have been fully considered but they are not persuasive.
2. The Office Action fully and clearly stated that each element was taught in cited sections of the Douglas reference by pointing out each limitation and a separate column and line citation to the reference. This is "fully and clearly stat[ing] the grounds for rejection."
3. Applicant argued that Douglas failed to disclose *obtaining priority information for the information*. In Douglas, the HEIGHT signals indicate the level of the data router node to transmit information to. Applicant's specification supports this reading. In Applicant's specification, paragraph [018], page 4 as originally filed, Applicant refers to nodes as using a coordinate identification system. Applicant uses a (X,Y) two coordinate system, whereas Douglas uses an (i,j,k) three coordinate system which is more precise. Applicant's specification states that the priority information is obtained from a header portion associated with the message or information packet. Specification, page 8, [028]. Applicant's specification indicates that priority is "a general indicator related to the urgency of the message, or the need to reach the destination in a timely fashion." Specification, page 8, [028]. Douglas, column 108, lines 33-42 further indicates a CHILD MAP signal which forces the association of a module in order to couple packets with a child module – in effect, "a general indicator related to the urgency of the message, or the need to reach the destination in a timely fashion."
4. Applicant argued that Douglas failed to disclose *ascertaining a remaining communication length for the information for each of the plurality of other channels*. One of ordinary skill is aware that a flit is comprised of four bits in parallel computing. See further Douglas, column 8, line 64. The C"l" IN FLIT signals indicate the receipt of four-bit flits for a packet, which is *ascertaining a remaining communication length for the information for each of the plurality of other channels*.
5. Applicant argued that Douglas failed to disclose *determining a current demand for each of the plurality of other channels*. The C"in" IN FLY signals transmitted by each child indicate the amount of flits, or demand, placed upon that child or channel.

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6. Applicant argued that Douglas failed to disclose *routing the information entering at the first channel to one of the plurality of other channels based upon an evaluation*. Applicant's actual claim language was *routing the information entering at the first channel to one of the plurality of other channels based upon an evaluation that considers a combination of the obtained priority information, the ascertained communication length for each of the plurality of other channels, and the current demand for each of the plurality of other channels*. In column 108, lines 57-65, the message address portion is reviewed of the packet. The header of the packet was previously established to have priority information in column 108, lines 20-21. The C"i" IN FLIT signals and the child circuits transmits the packets to the appropriate node based upon the message address header and the priority information. This is *routing the information entering at the first channel to one of the plurality of other channels based upon an evaluation*.

7. Applicant argues that claim 17 is not similar to claims 1 and 21, even though the claim language is almost verbatim the same for the limitations beyond the preamble. Applicant repeats this argument for claim 21. At no point does Applicant state how the claim limitations of claim 17 and claim 21 are not substantially the same as claim 1, even though they are worded almost identically. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). It is unclear whether Applicant is attempting to argue that independent claims 1, 17 and 21 are independent and distinct inventions, thus requiring a restriction to be made.

8. Applicant fails to appreciate the current breadth of the claims, since a basic parallel computing reference from 1996 was applied against them.

#### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Douglas et al. (US 5,530,809).

11. In regard to claim 1, 17, 21, Douglas disclosed:

*obtaining priority information for the information; column 108, lines 9-42*

*ascertaining a remaining communication length for the information for each of the plurality of other channels; column 108, lines 47-56*

*determining a current demand for each of the plurality of other channels; and column 108, lines 46-56*

*routing the information entering at the first channel to one of the plurality of other channels based upon an evaluation that considers a combination of the obtained priority information, the ascertained communication length for each of the plurality of other channels, and the current demand for each of the plurality of other channels. Column 108, lines 57-65*

12. In regard to claim 2, 18, Douglas disclosed:

*determining a demand for channels coupled to remote nodes between a current node and a destination node and utilizing this priority information in determining a channel over which to route the information entering the at least one of the plurality of distributed switching nodes. Column 109, lines 28-42*

13. In regard to claim 3, Douglas disclosed:

*obtaining a destination node from a header portion of the information. Column 111, lines 32-50*

14. In regard to claim 4, Douglas disclosed:

*ascertaining the remaining communication length more specifically comprises ascertaining a quantifiable identification of a number of intermediate nodes that the information will traverse before reaching a destination node. Column 112, lines 26-42*

15. In regard to claim 5, Douglas disclosed:

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*the obtaining priority information more specifically comprises retrieving a priority indicator from a header portion of the information.* Column 111, lines 17-50

16. In regard to claim 6, Douglas disclosed:

*the obtaining priority information more specifically comprises evaluating a payload portion of the information.* Column 112, lines 16-25

17. In regard to claim 7, Douglas disclosed:

*ascertaining the remaining communication length comprises receiving and evaluating network information communicated from other nodes in the network.* Column 113, lines 3-26

18. In regard to claim 8, Douglas disclosed:

*ascertaining the remaining communication length comprises computing the communication length based on a priori information about the network.* Column 108, lines 9-32

19. In regard to claim 9, Douglas disclosed:

*determining the current demand for each of the plurality of other channels comprises evaluating a state of an output queue for each of the other channels.* Column 108, lines 9-21

20. In regard to claim 10, 19, 22, Douglas disclosed:

*routing the information comprises a substantially balanced weighting of the obtained priority information, the ascertained communication length, and the current demand.* Column 108, lines 57-67

21. In regard to claim 11, 20, Douglas disclosed:

*routing the information comprises an unbalanced weighting of the obtained priority information, the ascertained communication length, and the current demand.* Column 108, lines 57-67

22. In regard to claim 12, Douglas disclosed:

*the information is embodied in a packet.* Column 117, lines 1-14

23. In regard to claim 13, Douglas disclosed:

*the information is embodied in a flit.* Column 117, lines 1-14

24. In regard to claim 14, Douglas disclosed:

*the information is embodied in a plurality of flits that collectively comprise an information packet.*

Column 117, lines 1-14

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25. In regard to claim 15, Douglas disclosed:

*the routing is performed on a per-flit basis.* Column 117, lines 1-14

26. In regard to claim 16, Douglas disclosed:

*the routing is performed on a first flit, and remaining flits in information packet are routed to the same other channel as the first flit.* Column 117, lines 1-14

### **Conclusion**

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571)272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey R. Swearingen  
Examiner  
Art Unit 2145

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